

ABSTRACT OF THE DISCLOSURE

5 A semiconductor memory device includes a sense line, a data line, a memory connected between the sense line and the data line having an active restoration function, and a sense amplifier connected between the sense line and the data line. The sense amplifier senses and inverts the data in the sense line, and outputs the inverted data to the data line. The polarity of the data on the sense line is opposite the polarity of the data on the data line, and the data in the data line are written to the memory. The semiconductor memory device is capable of performing an active restoration function which makes it possible to rewrite the result of sensing operations from the sense amplifier without the need for an additional circuit or operations.

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